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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/770,352
Filing Date: February 02, 2004
Appellant(s): WHITCOMB, CARL E.

Jeffrey L. Streets
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/21/10 appealing from the Office action mailed 10/7/09.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Appeal 2008-2136, and appeal for pending application 10/075096.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-3,5-54,63-74 are pending in the application. Claims 1-3,5-40,46-50,63-74 are rejected. Claims 41-45,51-54 have been withdrawn from consideration. Claims 4,55-62 are cancelled.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office

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action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6202348	Reiger	3-2001
3080680	Reynolds et al.	3-1963
4939865	Whitcomb et al.	7-1990
4716680	Whitcomb et al.	1-1988
5311700	Thomas	5-1994
GB2073567	Berlit	10-1981
EP300578	Van der Goorbergh	1-1989
5852896	Flasch	12-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

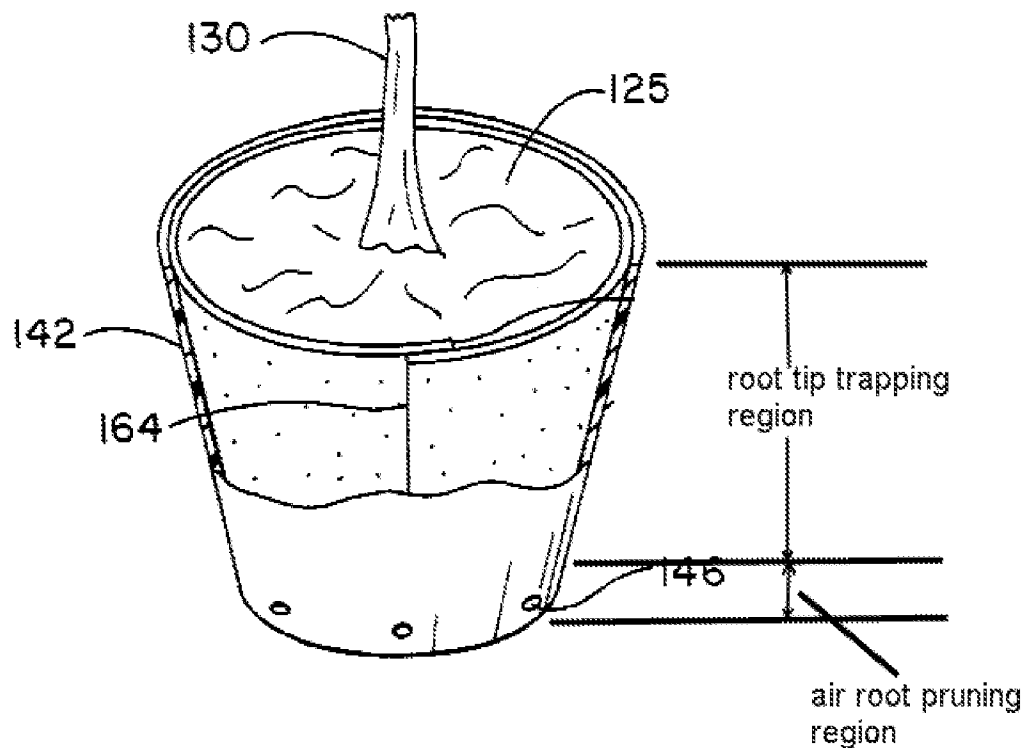
A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1,2,7,37 are rejected under 35 U.S.C. 102(a) as being anticipated by Reiger (6202348).

For claim 1, Reiger teaches a sidewall for a plant container, comprising: a substantially water-impermeable root-tip-trapping region (wall 142 and liner 120 together trap root tips 184 as stated in col.7,lines 42-62,col. 8,lines 28-49, and also see illustration below for regions); and a porous air-root-pruning region (drain holes 146 at bottom portion of the sidewall that are exposed to air to which the adjacent fabric liner inherently performs the air root pruning function, and also see illustration below for regions) adjacent the root-tip-trapping region, wherein the root-tip-trapping region is a contiguous upper portion of the sidewall (there are no breaks or interruption in the sidewall for the root tip trapping region, hence, contiguous) and the air-root-pruning region is a contiguous lower portion of the sidewall (there are no breaks or interruption in the sidewall for the air root pruning region, hence, contiguous). Note also the Board's decision filed 6/13/08, page 8.



For claim 2, Reiger teaches wherein the root-tip-trapping region is colinear with the air-root-pruning region (as shown in the illustration above, the air root pruning region comes right after (in a linear sequence) the root tip trapping region).

For claim 7, Reiger teaches wherein the sidewall is flexible, rigid, or a combination thereof (the liner 120 is flexible and the pot wall 142 is rigid, thus, the sidewall as a whole is a combination of both flexible and rigid).

For claim 37, Reiger teaches wherein the sidewall is an integral part of a container (as in the whole unit assembly).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3,12,14-20,26,27,32,33,46-50,63,64,67,68 are rejected under 35

U.S.C. 103(a) as being unpatentable over Reiger as applied to claim 1 above, and further in view of Reynolds et al. (3080680).

For claims 3,67, Reiger teaches wherein the root-tip-trapping region comprises a porous fabric layer 120 snugly placed into a layer of a root-impenetrable material 142. “Snugly”, technically, fits the definition of bond because, according to www.dictionary.com, the word bond can mean something that binds, fastens, confines or holds together.

In the event that Applicant believes that snugly does not fits the definition of bond, then Reynolds et al. teach in the same field of endeavor of a sidewall for a plant container as Reiger, in which Reynolds' sidewall includes a root-tip-trapping region comprises a porous fabric layer 18 bonded to a layer of a root-impenetrable material 60,62 (col. 2,lines 47-52,col. 6,lines 3-6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to bond the layers as taught by Reynolds of the sidewall of Reiger in order to secure the layers together but yet allow the user to remove the outer layer or the root impenetrable material as desired such as in the case for transplanting. Note that Reynolds also teaches snugly, col. 2,lines 61-62.

For claim 12, Reiger as modified by Reynolds et al. further teaches wherein the root-impenetrable material is water- impermeable (col. 3,lines 28-29,63-65, inherently

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taught in Reiger because if not water-impermeable, why would Reiger disclose drain holes).

For claims 14-15, Reiger as modified by Reynolds et al. is silent about wherein the porous fabric has a weight between 2 and 10 or 4 and 6 ounces per square yard. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the porous fabric of Reiger as modified by Reynolds et al. with a weight between 2 and 10 or 4 and 6 ounces per square yard, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. Note that Reiger does teach weight in ounces in col. 9, lines 1-5.

For claim 16, Reiger as modified by Reynolds et al. is silent about wherein the porous fabric has openings between 1/16 and 1/4 inch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the porous fabric of Reiger as modified by Reynolds et al. with openings between 1/16 and 1/4 inch, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect (depending on the plant root sizes) is achieved involves only routine skill in the art.

For claim 17, Reiger as modified by Reynolds et al. teaches wherein the porous fabric is a spun bonded, needle punched fabric (col. 9, lines 6-15 of Reiger).

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For claim 18, Reiger as modified by Reynolds et al. teaches wherein the porous fabric is selected from polyesler, polypropylene or other olefin fiber (col. 9,lines 6-15 of Reiger).

For claim 19, Reiger as modified by Reynolds et al. teaches wherein the porous fabric is a woven or knitted fabric (col.8,lines 64-67,col. 9,lines 1-15 of Reiger).

For claim 20, Reiger as modified by Reynolds et al. teaches wherein the porous fabric is degradable (col.8,lines 64-67,col. 9,lines 1-15 of Reiger).

For claims 26-27, Reiger teaches the root impenetrable material is plastic (col. 3,line 29) but is silent about the material being a polymer sheet selected from polyethylene and polypropylene.

As mentioned above, Reynolds et al. teach a polymer sheet 60,62 selected from polyethylene and polypropylene (col. 5,lines 5-7) for covering the porous fabric layer 18. It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the root impenetrable material of Reiger as modified by Reynolds et al. out of a polymer sheet selected from polyethylene and polypropylene as further taught by Reynolds et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice.

For claims 32-33, Reiger as modified by Reynolds et al. is silent about the root-impenetrable material having a thickness between 2 and 10 mils or 3 and 5 mils. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the root-impenetrable material of Reiger as modified by Reynolds et

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al. with a thickness between 2 and 10 mils or 3 and 5 mils, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable value/ranges until the desired effect is achieved involves only routine skill in the art.

For claims 46,68, Reiger as modified by Reynolds et al. teach wherein the porous fabric layer 120 of the root tip trapping region (as shown in the illustration above) extends beyond the layer of root impenetrable material (at the drain holes 146) to form the porous air root pruning region. Note that the liner 120 extends or covers the drain holes. The drain holes are where the layer of root impenetrable material does not exist, thus, the liner 120 does extends beyond the root impenetrable material in the areas of the drain holes.

For claim 47, see claim 17 above.

For claim 48, see claim 14 above.

For claim 49, see claim 26 above. Reiger teaches the porous fabric being spun bonded fabric as stated above, and Reynolds et al. teach the polyethylene sheet for the root impenetrable layer as stated above.

For claim 50, see claims 26,32 above.

For claim 63, Reiger as modified by Reynolds et al. teach wherein the porous fabric layer 120 of the root tip trapping region (as shown in the illustration above) extends beyond the layer of root impenetrable material (at the drain holes 146) to form the porous air root pruning region. Note that the liner 120 extends or covers the drain holes. The drain holes are where the layer of root impenetrable material does not exist,

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thus, the liner 120 does extends beyond the root impenetrable material in the areas of the drain holes.

For claim 64, Reiger as modified by Reynolds et al. is silent about wherein the layer of root impenetrable material is disposed over $1/2$ to $9/10$ of the porous fabric layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the layer of root impenetrable material be disposed over $1/2$ and $9/10$ of the porous fabric layer of Reiger as modified by Reynolds et al., depending on the type of plant being grown because different plants might need different air root pruning, thus, if a plant needs less air root pruning, then the sidewall would be made more of root tip trapping region than air root pruning region.

Claims 5,6,13,65,66,69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger (as above).

For claims 5-6, Reiger is silent about wherein the root-tip-trapping region comprises between $1/2$ and $9/10$ or $2/3$ and $3/4$ of the sidewall. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the root-tip-trapping region comprises between $1/2$ and $9/10$ or $2/3$ and $3/4$ of the sidewall of Reiger, depending on the type of plant being grown because different plants might need different air root pruning, thus, if a plant needs less air root pruning, then the sidewall would be made more of root tip trapping region than air root pruning region.

For claim 13, Reiger is silent about wherein the root-tip-trapping region comprises greater than 10 root-tip-trapping elements per square inch. It would have been obvious to one having ordinary skill in the art at the time the invention was made

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to have the root-tip-trapping region of Reiger comprising greater than 10 root-tip-trapping elements per square inch, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect (depending on how much root tip one wishes to trap) is achieved involves only routine skill in the art.

For claims 65-66, the limitation as claimed has been explained in the above, thus, please see above.

For claim 69, Reiger teaches the regions are configured in a patten of rows as shown in the illustration above. The drain holes constituting the air root pruning region is in a row and the root tip trapping region is in a row up from the drain holes.

Claims 8,9,11,36,38-40,70-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as applied to claim 1 above, and further in view of Whitcomb et al. (4939865).

For claim 8, Reiger teaches air-root-pruning region (see illustration above, the liner covers the holes 146) form a bendable sheet (the liner is bendable sheet). However, Reiger is silent about wherein the root-tip-trapping form a bendable sheet.

Whitcomb et al. teach in the same field of endeavor of a sidewall for a plant container as Reiger, in which Whitcomb et al.'s sidewall includes sheets of material that are bendable to form a container. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the root tip trapping region of Reiger be formed from a bendable sheet as taught by Whitcomb et al. in order to allow

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a user the flexibility to form the container into a selected size as desired (col. 2, lines 15-18).

For claim 9, Reiger is silent about wherein the air-root-pruning region includes protuberances having outwardly extending distal ends that are open.

Whitcomb et al. teach in the same field of endeavor of a sidewall for a plant container as Reiger, in which Whitcomb et al.'s sidewall includes protuberances 20, 22 having outwardly extending distal ends 18 that are open. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have protuberances having outwardly extending distal ends that are open as taught by Whitcomb et al. in the air-root-pruning region of Reiger in order to direct the roots to the holes for a quicker air pruning (Whitcomb et al., col. 2, lines 27-29).

For claim 11, Reiger teaches the porous fabric layer or liner 120 of the sidewall being sewn together at its edges (see fig. 10 and col. 8, lines 4-7). However, Reiger is silent about the layer of root impenetrable material 142 being secured at its edges.

Whitcomb et al. teach in the same field of endeavor of a sidewall for a plant container as Reiger, in which Whitcomb et al.'s sidewall includes sheets of material that are bendable to form a container. The sheets forming the container are connected by hooking edges of the sheet together with tenons 28 and mortises 30. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the root tip trapping region of Reiger be formed from a bendable sheet as taught by Whitcomb et al. and to hook the edges of the sheet as further taught by Whitcomb et

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al. together, in order to allow a user the flexibility to form the container into a selected size as desired (col. 2, lines 15-18).

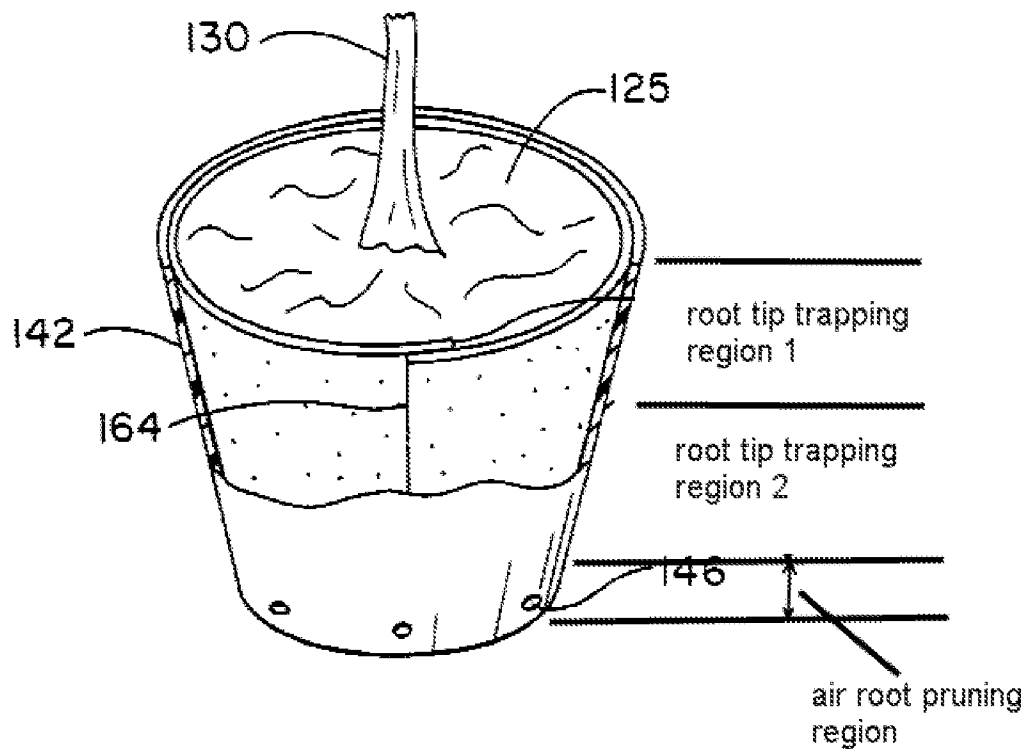
For claim 38, as mentioned above, Whitcomb et al. teach wherein the sidewall is a discrete panel that can form a container. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the sidewall of Reiger be a discrete panel that can form a container as taught by Whitcomb et al., in order to allow a user the flexibility to form the container into a selected size as desired and easier for assemblage/disassemblage (col. 2, lines 15-18).

For claim 70, the limitation has been explained, thus, please see above, especially claims 1 & 8.

For claim 36, the limitation has been explained, thus, please see above, especially claim 69.

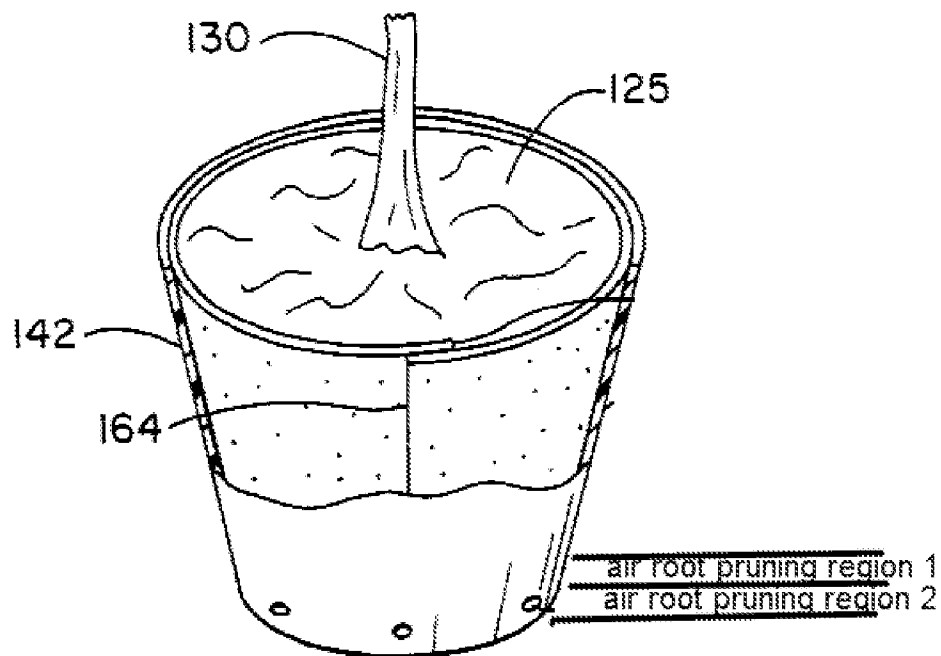
For claim 39, since there is no boundary defined in Applicant's invention regarding regions, the examiner is considering the regions as illustrated below as taught by Reiger as modified by Whitcomb et al. (emphasis on Reiger).

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For claim 40, since there is no boundary defined in Applicant's invention regarding regions, the examiner is considering the regions as illustrated below as taught by Reiger as modified by Whitcomb et al. (emphasis on Reiger).

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For claims 71-72, the limitation has been explained, thus, please see above, especially claim 5.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as applied to claim 1 above, and further in view of Whitcomb et al. (4716680).

For claim 10, Reiger is silent about wherein the root-tip-trapping region includes protuberances having outwardly extending distal ends that are closed to trap roots.

Whitcomb et al. teach in the same field of endeavor of a sidewall for a plant container as Reiger, in which Whitcomb et al.'s sidewall includes protuberances 52,54,56,60,62 having outwardly extending distal ends 56,58 that are closed to trap roots. It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to have protuberances having outwardly extending distal ends that are closed to trap roots as taught by Whitcomb et al. in the root-tip-trapping region of Reiger in order to prevent spiral root growth and to maximize development of lateral root tips along and around the sides of the container (Whitcomb et al., col. 2, lines 60-65).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds et al. as applied to claims 1,3 above, and further in view of Thomas (5311700).

For claim 21, Reiger as modified by Reynolds et al. is silent about wherein the porous fabric is cotton.

Thomas teaches a sidewall for a container wherein he employ a porous fabric made out of cotton (col. 5, line 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ cotton as taught by Thomas as the preferred porous fabric in the container of Reiger as modified by Reynolds et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (biodegradability for friendlier to the environment) as a matter of obvious choice

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds et al. as applied to claims 1,3 above, and further in view of Berlitz et al. (GB 2073567).

For claims 22-23, Reiger as modified by Reynolds et al. is silent about wherein the porous fabric is opaque, black or gray.

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Berlit et al. teach a sidewall for a container wherein they employ an opaque or black material to prevent light from harming the roots (page 1, lines 100-105). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an opaque or black material as taught by Berlit et al. in the container of Reiger as modified by Reynolds et al. in order to prevent light from harming the roots.

For claim 24, Reiger as modified by Reynolds et al. (emphasis on Reynolds et al. since they are relied on for the bonding of the porous fabric and the root impenetrable material) teaches the porous fabric adheres to the root impenetrable material as explained in the above. However, Reiger as modified by Reynolds et al. did not specify if the bonding is by a method selected from gluing, laminating and combinations thereof.

In addition to the above, Berlit et al. teach a plurality of layers laminated to make the container. It would have been an obvious substitution of functional equivalent to substitute the bonding method of Reiger as modified by Reynolds et al. to bond the porous fabric with the root impenetrable material with the bonding method of laminating as taught by Berlit et al., since a simple substitution of one known element for another would obtain predictable results. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739, 1740, 82 USPQ2d 1385, 1395, 1396 (2007).

Claims 25,29,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds et al. as applied to claims 1,3 above, and further in view of Van der Goorbergh (EP 300578A3).

For claims 25,29, Reiger as modified by Reynolds et al. is silent about wherein the root-impenetrable material is reflective such as a metal foil.

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Van der Goorbergh teaches a container having metal foil material (aluminum foil), which is a reflective material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a metal foil material as taught by van der Goorbergh for the root impenetrable material in the container of Reiger as modified by Reynolds et al. in order to reflect harmful light away from the plant.

For claim 31, Reiger as modified by Reynolds et al. is silent about wherein the root-impenetrable material is white.

In addition to the above, van der Goorbergh teaches the root- impenetrable material 6 being white (col. 2, line 55 & col. 3, line 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a white polymer sheet as taught by van der Goorbergh as the preferred material for the root-impenetrable material of Reiger as modified by Reynolds et al. in order to reflect harmful light away from the plant (col. 2, lines 54-55 of van der Goorbergh).

Claims 28,34,35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds et al. as applied to claims 1,3 above, and further in view of Flasch (5852896).

For claim 28, Reiger as modified by Reynolds et al. is silent about wherein the root-impenetrable material is metal.

Flasch teaches a sidewall for a container comprising a root- impenetrable material 6 made out of metal (col. 12, line 38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ metal as

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taught by Flasch as the preferred root-impenetrable material of Reiger as modified by Reynolds et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice.

For claims 34-35, Reiger as modified by Reynolds et al. is silent about wherein the root-impenetrable material is biodegradable.

In addition to the above, Flasch also states that the container's root-impenetrable material 6 made out of wood (col. 12, line 38), which wood is biodegradable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ wood as taught by Flasch as the preferred root-impenetrable material of Reiger as modified by Reynolds et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (better for the environment) as a matter of obvious choice.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds et al. and Berlitz et al. as applied to claims 1,3,22 above, and further in view of Flasch (as above).

For claim 30, Reiger as modified by Reynolds et al. and Berlitz et al. is silent about wherein the root-impenetrable layer is pervious to UV radiation.

In addition to the above, Flasch teaches using a UV inhibitor to provide UV light stability (col. 12, line 45). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a UV inhibitor as taught by Flasch in

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the root impenetrable material of Reiger as modified by Reynolds et al. and Berlitz et al. in order to block out harmful UV radiation.

Claims 73-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Whitcomb et al. as applied to claim 70 above, and further in view of Reynolds et al. (as above).

The limitations have been explained in the above, thus, please see above, especially claims 3,46.

(10) Response to Argument

Rejection of claims 1,2,7, and 37

Claim 1

Appellant argued that Reiger's widely-spaced drain holes 146 (Reiger, FIG. 8) are, under the Board's previous interpretation, a plurality of discrete, separate, and widely-spaced regions. Thus, the drain holes 146 do not constitute an air-root-pruning region that is a contiguous lower portion of the sidewall as presently recited in claim 1.

The Board's decision rendered on June 13, 2008, did not state "a plurality of discrete, separate, and widely-spaced regions " as alleged by Appellant. The Board simply stated that the drain holes 146 in the lower regions of the pot serve as air root pruning region because the roots will penetrate the liner in the drain hole regions and be exposed to air. Based on the definition of "contiguous", the word is defined as "adjacent or neighboring"; thus, the regions where the drain holes are located in Reiger is a contiguous lower portion of the sidewall. In addition, even if considered to be "a plurality

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of discrete, separate, and widely-spaced regions”, the regions where the drain holes are located at in Reiger still meet the claimed language because the claim does not specifically state how far apart the holes or apertures in the air root pruning region are to be. Therefore, it is irrelevant to argue that Reiger teaches a plurality of discrete, separate, and widely-spaced regions, especially when the limitation is not being claimed.

Appellant argued that any air-root-pruning in the container of Reiger due to drain hole regions is going to be negligible, specifically because the drain holes 146 asserted by the Board (and assumed, arguendo, herein) to individually provide air-root- pruning are widely spaced, have a relatively small combined area, and do not constitute a contiguous portion of the sidewall.

Negligible or not, the drain holes do provide air-root-pruning as claimed by appellant. In addition, it appears that appellant is merely making an allegation without support. What proof or evidence does appellant has to provide to back up the statement that the drain holes of Reiger is negligible to air root pruning? If any, the drain holes 146 of Reiger cover most of the bottom area of the pot, so this is pretty negligible for air root pruning because, as the Board stated, the roots will penetrate the liner in those drain holes regions, thus, will expose the roots to air, hence, air root pruning. Moreover, it would be hard to argue “widely spaced” because appellant did not claimed how much space between holes or apertures to create the air root pruning. Furthermore, the drain holes of Reiger are contiguous at lower region of the sidewall, even assuming that they

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are widely spaced, because they occupied most of the area in the lower region of the sidewall.

The vast majority of the roots will grow out and contact the generally curved sidewall of Reiger's plant container between the widely-spaced drain holes 146. As the roots contact the curved sidewall, one skilled in the art would expect the roots to be deflected in a direction tangent to the sidewall, causing most of the roots to grow past (rather than through) the drain holes. Thus, no appreciable air-root pruning will result from the drain holes 146, and the benefit of air-root-pruning, such as preventing spiral root growth and maximizing the development of lateral roots, will be virtually non-existent.

Again, appellant is making an allegation without proof or evidence. It is possible that some roots will grow upward along the sidewall; however, it is also possible that some roots will grow laterally outward from the drain holes. To assume that the roots only grow upwardly tangent to the sidewall would be incorrect, unless there is proof of such happening. Clearly, the roots growing laterally out of the drain holes are possible and not virtually non-existent.

Appellant argued that, to be clear, claim 1 does not recite that the air-root-pruning region is in (or on) a contiguous lower portion of the sidewall, as read by the examiner. Rather, the air-root-pruning region, itself, is required by claim 1 to be a contiguous lower portion of the sidewall. While the difference between the examiner's modified wording and the actual wording of claim 1 may appear similar, at first glance, the meaning is entirely different. The adjective

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"contiguous" refers to the air- root-pruning region, not merely the sidewall. Thus, while Reiger arguably teaches drain holes in a contiguous lower portion of a sidewall (no breaks or interruption in the sidewall) Reiger does not teach an air-root-pruning region that is a contiguous lower portion of the sidewall.

As stated by the Board decision rendered on June 13, 2008, the drain holes serve as air root pruning areas. These holes are contiguous lower portion, even though they might be spaced farther apart than appellant, but they are, nevertheless, contiguous to meet the claimed language. They have no breaks or interruption and are in contiguous pattern in the lower portion of the pot. In addition, the specification does not define the exact meaning of what appellant considered to be "contiguous" because, in order to interpret the word the way appellant interpreted it, appellant should define it clearly. However, appellant did not do so, thus, cannot assume a narrower definition of the word because contiguous merely means adjacent or neighboring as stated in the above.

(2) Rejection of Claims 3, 12, 14-20, 26, 27, 32, 33, 46-50, 64, 67, 68

Claim 3

Appellant argued that within the broadest reasonable interpretation of Appellant's Specification, Reiger does not teach a porous fabric layer bonded to a layer of root-impenetrable material. The Board previously found that Reynolds' teaches bonding of two layers generally. See BPAI Decision, page 6 (with reference to original claim 46: A sidewall for a plant container, comprising: a water permeable, porous fabric layer and a water impermeable, root-impenetrable

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layer bonded to a portion of the outer face of the fabric layer.) However, the Board further found that Reynolds expressly teaches that roots grow into the interface between the sheet and pot and, therefore, that the polymer sheet and fibrous pot sidewall of Reynolds' does not constitute a root- tip-trapping region. See BPAI Decision, page 5. Thus, Reynolds expressly teaches away from the claim 3 limitation of a root-tip-trapping region comprising a porous fabric layer bonded to a layer of root-impenetrable material.

Reynolds et al. were not relied on for a teaching that roots grow into the interface between the sheet and pot and, therefore, that the polymer sheet and fibrous pot sidewall of Reynolds' does not constitute a root- tip-trapping region. Claim 3 was rejected under Reiger in view of Reynolds et al., hence, Reynolds et al. were relied on for the concept of bonding two layers of a flower pot together (as agreed by the Board's decision on June 13,2008). In addition, Reynolds et al. also teach a two-layered pot is used for transplanting (col. 1, lines 14-15 of Reynolds), which transplanting is in the same field of endeavor as Reiger for his pot. Thus, one of ordinary skill in the art would realized to combine these two references for a teaching of a flower pot with multiple layers (as already taught by Reiger) that are bonded (as taught by Reynolds) together for transplanting. The examiner stated in the final rejection that, in the event that appellant does not believe "snugly" fits the definition of bonding, the examiner will relied on Reynolds et al. for this teaching of bonding to combine with Reiger.

Claims 32 and 33

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Appellant argued that the examiner contends the range of thickness of the root impenetrable material of "Reiger as modified by Reynolds" would be obvious in that "discovering the optimum or workable value/ranges until the desired effect is achieved involves only routine skill in the art" (the examiner fails to cite any authority for this assertion). The examiner is not clear what "Reiger as modified by Reynolds" means in the context of these assertions - i.e. which elements or limitations of Reynolds is the examiner purporting to modify Reiger with? Furthermore, the examiner has also not explained how or why the teachings of Reynolds would or could be combined with Reiger. For example, Reynolds discusses a process which permits an enrobement to be pulled closely about the exterior wall of a [fibrous] pot or the use of pressure molding in forming a tightly fitting skin around the pot. See Reiger, Col. 3, lines 7-11. It is unclear how that process would be evident or even possible in combination with the construction of Reiger's fabric-lined pot so as to render such a combination obvious.

From the rejection, the examiner explained that Reiger teaches a root impenetrable material. As a matter of fact, Reiger teaches the same root impenetrable material and root tip trapping as appellant. The rejection does not rely on Reynolds et al. for root impenetrable material because Reiger (the main reference) teaches it already. In any event, for claim 32-33, Reiger is silent about the numerical value for the thickness of the root impenetrable layer. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the root-impenetrable material of Reiger as modified by Reynolds et al. with a thickness between

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2 and 10 mils or 3 and 5 mils, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable value/ranges until the desired effect is achieved involves only routine skill in the art. This case law, *In re Aller*, 105 USPQ 233, was employed because appellant is claiming a range that has no special criticality or unexpected result, and appears to only result from general routine testing and experiment to derive at the range depending on the plant type. This is evidence in paragraph [0034] of appellant pgpub 2004/0200141A1 because this paragraph stated that the range is merely a preference and that any other desired thickness can be employed. Thus, this clearly indicates that there is no unexpected result coming from these ranges, and that it is merely a personal preference.

As for the comment regarding enrobement, this has nothing to do with claims 32-33 nor their dependency (claims 1,3). Claims 32-33 called for thickness ranges for the root impenetrable layer, thus, do not pertain to enrobement or pressure molding as commented by appellant.

Moreover, the claimed ranges of between 2 and 10 mils or between 3 and 5 mils would be unworkable in accordance with the teachings of the references. Reiger identifies the structural weakness of conventional air-root-pruning containers as being problematic. If the sidewall 142 of the pot 115 were no more than 10 mils thick, the pot itself would be far too flimsy at a thickness of 10 mils or less to meet the stiffness objectives suggested by Reiger, particularly with

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Reiger's concern about weak pots. Thus, Reiger teaches away from the combination of the ranges of thickness recited in claims 32 and 33.

Again, appellant is making an allegation without proof or evidence. The excerpt (col. 3, lines 11-20 of Reiger) provided by appellant does not even suggest the thickness of the root impenetrable layer nor the importance of having this layer more than 10 mils. The excerpt concentrates on conventional transplanting pots having weak edges and seams that are not strong enough to support transplantation. This has nothing to do with how thick the root impenetrable layer should be because the problem is the seams and edges, and not the thickness of the pot's outer layer. To further emphasize, col. 3, lines 7-10, Reiger talks about the desire to have a strong pot is based on strong joining of the edges and seams and not the thickness of the layers.

(2) Rejection of Claims 5, 6, 13, 65, 66, and 69

Claims 5, 6, 65, and 66

Appellant argued that the examiner has provided no specific support in the prior art for the root tip-trapping region comprising between 1/2 and 9/10 of the sidewall (as set out in claims 5 and 65), or for the root-tip-trapping region comprising between 2/3 and 3/4 of the sidewall (as set out in claims 6 and 66). The examiner attempts to compensate for this lack of specific support for the claimed ranges with the conjecture that the claimed range would be obvious, "depending on the type of plant being grown because different plants might need different air root pruning, thus, if a plant needs less air root pruning, then the sidewall would be made more of a root tip trapping region than air root pruning

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region." See Office Action dated October 7, 2009, page 8. This assertion is properly regarded as official notice, as it is not capable of such instant and unquestionable demonstration as to defy dispute. See *In re Ahlert*, 424 F.2d at 1091. Such official notice is not proper, particularly in the technology of the present subject matter, and further because the official notice was applied in a Final Office Action.

The examiner still maintains her comment in the final office action regarding "The examiner is not taking office notice as alleged by applicant, thus, it is uncertain where applicant derived at this conclusion? Clearly, the examiner is providing common sense articulated rational using case law in re *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739, 1740, 82 USPQ2d 1385, 1395, 1396 (2007)." It is clearly a proper articulated rational in the field of plant husbandry to derive at a conclusion that, "depending on the type of plant being grown because different plants might need different air root pruning, thus, if a plant needs less air root pruning, then the sidewall would be made more of a root tip trapping region than air root pruning region", one would want to make the root tip trapping region between $\frac{1}{2}$ and $\frac{9}{10}$ of the sidewall or between $\frac{2}{3}$ and $\frac{3}{4}$ of the sidewall.

Technically, although not specifically stated in Reiger, by looking at the figures, one can conclude that the root tip trapping region does occupied between $\frac{1}{2}$ and $\frac{9}{10}$ of the sidewall or between $\frac{2}{3}$ and $\frac{3}{4}$ of the sidewall because only the bottom area of the pot is occupied by the drain holes or air root pruning regions, so the rest of the pot is occupied by the root tip trapping region. However, it would be a mere assumption, thus,

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the examiner believes that it would be more of an obviousness rejection than anticipated rejection.

(2) Rejection of claims 8, 9, 11, 36, 38-40, and 71-72.

Claim 9

Appellant argued that the examiner asserts it would be obvious to combine Whitcomb's protuberances with Reiger's drain holes 146. The motivation, the examiner argues, is to direct the roots to the drain holes 146 for a quicker air pruning. However, there simply would be no reason to direct roots to the drain holes 146. The drain holes 146 taught by Reiger are presumably provided for draining water and not for air-root-pruning, regardless of whether the drain holes 146 provide some small amount of air pruning (which, as argued above, is likely negligible).

Appellant is arguing an intended use or function. Perhaps Reiger intends his drain holes for draining, however, these holes are no doubt, can function to allow the roots to grow outward for air pruning. "Some small amount of air pruning" is still air pruning. In addition, although not used for the motivation to combine, Whitcomb stated that the protuberances are also for rigidity and strength to the side panels 12 (col. 4, lines 20-23), thus, even if the redirect concept does not applied to Reiger, at least the rigidity and strength to the side panels would be applicable to Reiger.

Claim 11

Appellant argued that the combination of sewing together the edges of Reiger's fabric liner and hooking the edges of Whitcomb's sidewall would not

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result in a sidewall having both a root-tip- trapping region and an air-root-pruning region, much less wherein the root-tip-trapping region is a contiguous upper portion of the sidewall and the air-root-pruning region is a contiguous lower portion of the sidewall, in accordance with claim 1.

The response to argument for claim 1 is as stated in the above, thus, please see above. Appellant's argument lacks explanation because in what way does combining the combination of sewing together the edges of Reiger's fabric liner and hooking the edges of Whitcomb's sidewall would not result in a sidewall having both a root-tip-trapping region and an air-root-pruning region, much less wherein the root-tip-trapping region is a contiguous upper portion of the sidewall and the air-root-pruning region is a contiguous lower portion of the sidewall, would not result in the present invention? Whitcomb was relied on for a method of securing the edges of a flower pot together, so it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the root tip trapping region of Reiger be formed from a bendable sheet as taught by Whitcomb et al. and to hook the edges of the sheet as further taught by Whitcomb et al. together, in order to allow a user the flexibility to form the container into a selected size as desired (col. 2, lines 15-18 of Whitcomb).

Claim 70

Appellant argued that any air-root-pruning in the container of Reiger due to the several drain hole regions is going to be negligible, specifically because the drain holes 146 asserted by the Board to individually provide air-root-pruning are widely spaced and have a relatively small combined area. The vast majority of the

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roots will grow out and contact the generally curved sidewall of Reiger's plant container between the widely-spaced drain holes 146. Thus, no appreciable air-root pruning will result from the drain holes 146, and the benefit of air-root-pruning, such as preventing spiral root growth and maximizing the development of lateral roots, will be virtually non-existent.

The Board's decision rendered on June 13, 2008, did not state "a plurality of discrete, separate, and widely-spaced regions " as alleged by Appellant. The Board simply stated that the drain holes 146 in the lower regions of the pot serve as air root pruning region because the roots will penetrate the liner in the drain hole regions and be exposed to air. Based on the definition of "contiguous", the word is defined as "adjacent or neighboring"; thus, the regions where the drain holes are located in Reiger is a contiguous lower portion of the sidewall. In addition, even if considered to be "a plurality of discrete, separate, and widely-spaced regions", the regions where the drain holes are located at in Reiger still meet the claimed language because the claim does not specifically state how far apart the holes or apertures in the air root pruning region are to be. Therefore, it is irrelevant to argue that Reiger teaches a plurality of discrete, separate, and widely-spaced regions, especially when the limitation is not being claimed.

Negligible or not, the drain holes do provide air-root-pruning as claimed by appellant. In addition, it appears that appellant is merely making an allegation without support. What proof or evidence does appellant has to provide to back up the statement that the drain holes of Reiger is negligible to air root pruning? If any, the drain holes 146

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of Reiger cover most of the bottom area of the pot, so this is pretty negligible for air root pruning because, as the Board stated, the roots will penetrate the liner in those drain holes regions, thus, will expose the roots to air, hence, air root pruning. Moreover, it would be hard to argue "widely spaced" because appellant did not claimed how much space between holes or apertures to create the air root pruning. Furthermore, the drain holes of Reiger are contiguous at lower region of the sidewall, even assuming that they are widely spaced, because they occupied most of the area in the lower region of the sidewall.

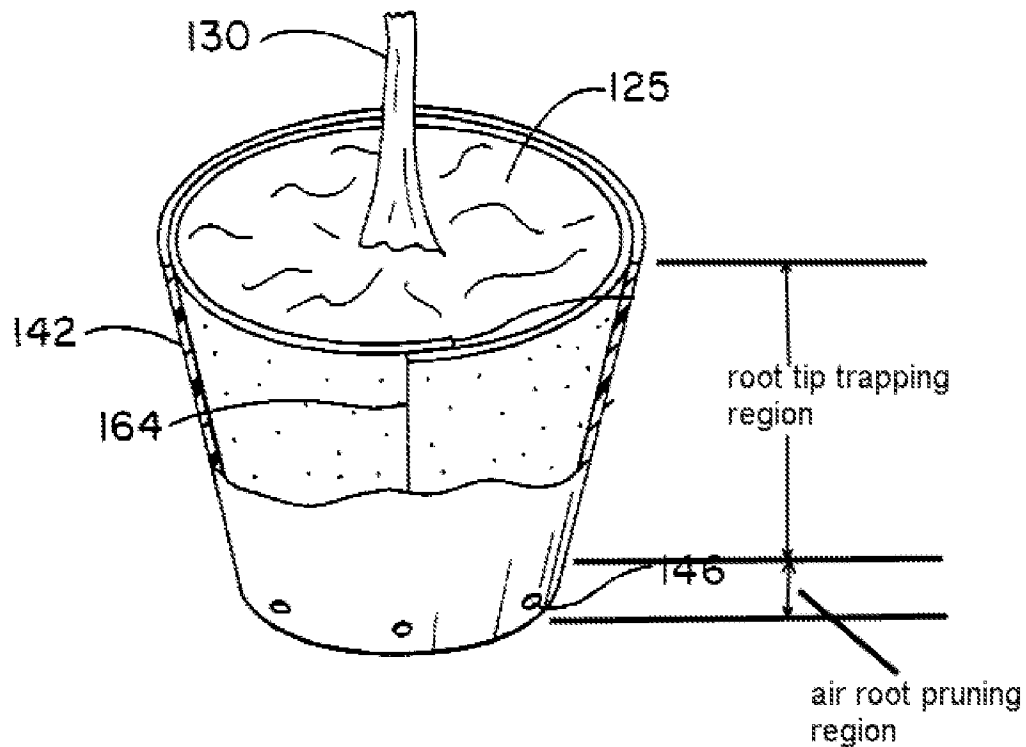
Again, appellant is making an allegation without proof or evidence. It is possible that some roots will grow upward along the sidewall; however, it is also possible that some roots will grow laterally outward from the drain holes. To assume that the roots only grow upwardly tangent to the sidewall would be incorrect, unless there is proof of such happening. Clearly, the roots growing laterally out of the drain holes are possible and not virtually non-existent.

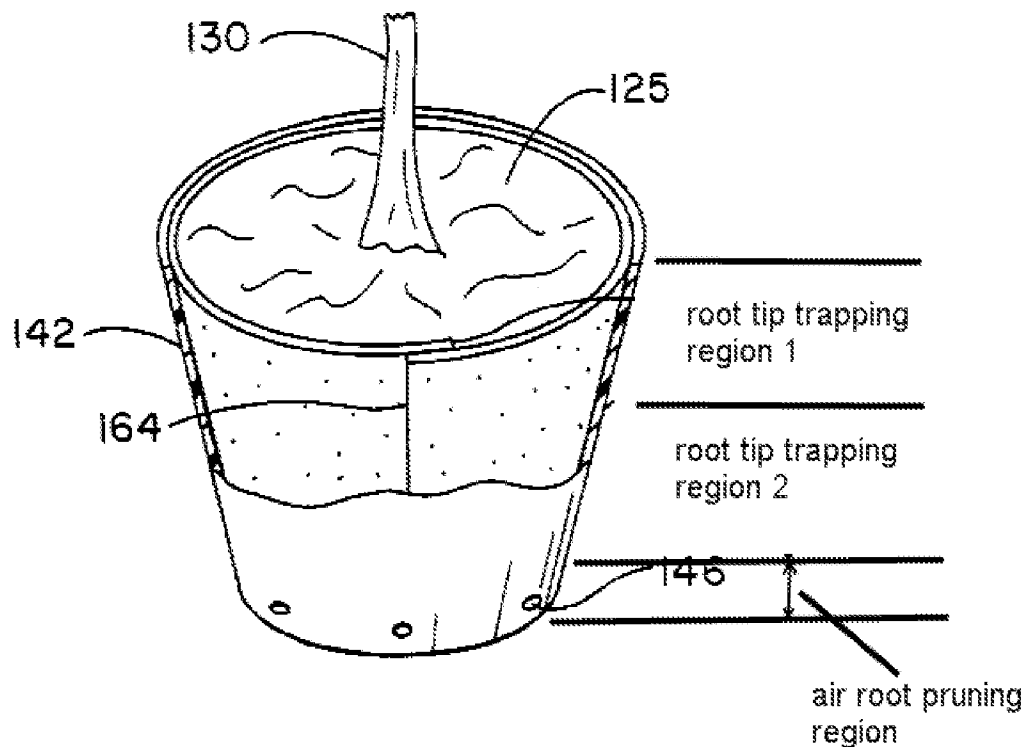
Claims 39 and 40

Appellant argued that the examiner's assertion that two regions can be found where there is no boundary setting apart the regions is inconsistent with the present specification as well as the ordinary meaning of a region. Contrary to the examiner's assertion, FIG. 1 of the present application clearly shows the boundary between two regions, which in this example are a root-tip-trapping region 13 and an air-root-pruning-region 20.

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According to a definition of the word "region", a region is a large, usually continuous segment of a surface or space; area (www.dictionary.com). Based on this definition, one can see clearly that Reiger teaches, in his drawings, regions where the root tip trapping exist and the air root pruning exist as shown in the illustration below.





e. Claim 10 is patentable under 35 U.S.C. 103(a) over Reiger in view of U.S. Patent No. 4,716,680 ("Whitcomb II")

(2) Rejection of claim 10

Appellant argued that the examiner has not cited any reason, nor shown, by a preponderance of evidence, that one skilled in the art would combine the recited structure of Reiger and Whitcomb I, when the recited structure of each of these references, taken separately, is already purported to provide root-tip-trapping.

The examiner stated in the rejection the reason to combine Reiger with Whitcomb II would be in order to prevent spiral root growth and to maximize

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development of lateral root tips along and around the sides of the container (Whitcomb et al., col. 2, lines 60-65). Thus, the examiner has cited reason for combining the references.

f. Claim 21 is patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of U.S. Patent No. 5,311,700 ("Thomas").

(2) Rejection of claim 21

Appellant argued that claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds as applied to claims 1 and 3 above, and further in view of Thomas. Claim 21 indirectly depends from claim 1 and is patentable for at least the same reasons as claims 1 and 3.

Since claim 21 depends on claim 1, the response to argument is the same as claim 1 in the above.

g. Claims 22-24 are patentable over Reiger and Reynolds in view of GB 2,073,567 ("Berlit").

(2) Rejection of claims 22-24

Appellant argued that claims 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds as applied to claims 1 and 3 above, and further in view of Berlit. Claims 22-24 indirectly depend from claim 1 and are patentable for at least the same reasons as claims 1 and 3.

Accordingly, withdrawal of this rejection is respectfully requested.

Since claims 22-24 depend on claim 1, the response to argument is the same as claim 1 in the above.

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h. Claims 25, 29, and 31 are patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of Van der Goorbergh.

(2) Rejection of claims 25, 29, and 31

Appellant argued that claims 25, 29 and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds, as applied to claims 1 and 3 above, and further in view of Van der Goorbergh. Claims 25, 29 and 31 indirectly depend from claim 1 and are patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

Since claims 25, 29 and 31 depend on claim 1, the response to argument is the same as claim 1 in the above.

i. Claims 28, 34, and 35 are patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of U.S. Patent No. 5,852,896 ("Flasch").

(2) Rejection of claims 28, 34, and 35.

Appellant argued that claims 28, 34 and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds, as applied to claims 1 and 3 above, and further in view of Flasch. Claims 28, 34 and 35 indirectly depend from claim 1 and are patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

Since claims 28, 34 and 35 depend on claim 1, the response to argument is the same as claim 1 in the above.

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j. Claim 30 is patentable under 35 U.S.C. 103(a) over Reiger, Reynolds, and Berlit in view of Flasch.

(2) Rejection of claim 30

Appellant argued that claim 30 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds and Berlit, as applied to claims 1, 3, and 22 above, and further in view of Flasch. Claim 30 indirectly depends from claim 1 and is patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

Since claim 20 depends on claim 1, the response to argument is the same as claim 1 in the above.

k. Claims 73-74 are patentable under 35 U.S.C. 103(a) over Reiger and Whiteomb I in view of Reynolds

(2) Rejection of claims 73 and 74

Appellant argued that claims 73-74 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Whitcomb as applied to claim 70 above, and further in view of Reynolds. Claims 73-74 directly or indirectly depend from claim 70 and are patentable for at least the same reasons as claim 70. Additionally, claim 73 is patentable for the reasons argued under separate subheading below. Accordingly, withdrawal of this rejection is respectfully requested.

Since claims 73-74 depends on claim 70, the response to argument is the same as claim 70 in the above.

Claim 73

Appellant argued that Reiger does not teach a porous fabric layer bonded to a layer of root-impenetrable material. The examiner asserts, in the alternative, that Reynolds' sidewall includes a root-tip- trapping region comprising a porous fabric layer bonded to a layer of root-impenetrable material. The Board previously found that Reynolds' teaches bonding of two layers generally. See BPAI Decision, page 6. However, the Board further found that Reynolds expressly teaches that roots grow into the interface between the sheet and pot and, therefore, that the polymer sheet and fibrous pot sidewall of Reynolds' does not constitute a root-tip-trapping region. See BPAI Decision, page 5. Thus, Reynolds expressly teaches away from the claim 73 limitation of a root-tip-trapping region comprising a porous fabric layer bonded to a layer of root-impenetrable material.

Reynolds et al. were not relied on for a teaching that roots grow into the interface between the sheet and pot and, therefore, that the polymer sheet and fibrous pot sidewall of Reynolds' does not constitute a root- tip-trapping region. Claim 3 was rejected under Reiger in view of Reynolds et al., hence, Reynolds et al. were relied on for the concept of bonding two layers of a flower pot together (as agreed by the Board's decision on June 13,2008). In addition, Reynolds et al. also teach a two-layered pot is used for transplanting (col. 1, lines 14-15 of Reynolds), which transplanting is in the same field of endeavor as Reiger for his pot. Thus, one of ordinary skill in the art would realized to combine these two references for a teaching of a flower pot with multiple layers (as already taught by Reiger) that are bonded (as taught by Reynolds) together

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for transplanting. The examiner stated in the final rejection that, in the event that appellant does not believe “snugly” fits the definition of bonding, the examiner will relied on Reynolds et al. for this teaching of bonding to combine with Reiger.

(11) Related Proceeding(s) Appendix

Copies of the court or Board decision(s) identified in the Related Appeals and Interferences section of this examiner’s answer are provided (in the appeal brief).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Son T. Nguyen/
Primary Examiner, Art Unit 3643

Conferees:

Marc Jimenez /Peter M. Poon/ for Marc Jimenez

Supervisory Patent Examiner, Art Unit 3643

Robert Swiatek /rps/